

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

08.06.2004

Applicant's or agent's file reference
PEIJ/212173

IMPORTANT NOTIFICATION

International application No.
PCT/ZA 03/00034

International filing date (day/month/year)
27.02.2003

Priority date (day/month/year)
01.03.2002

Applicant
DE KOCK, Cilliers

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

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preliminary examining authority:



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 09 JUN 2004

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| Applicant's or agent's file reference PEIJ/212173 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA416) | |
| International application No. PCT/ZA 03/00034 | International filing date (day/month/year) 27.02.2003 | Priority date (day/month/year) 01.03.2002 |
| International Patent Classification (IPC) or both national classification and IPC A47J37/04 | | |
| Applicant DE KOCK, Cilliers | | |

- This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

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| Date of submission of the demand 18.08.2003 | Date of completion of this report 08.06.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Rattenberger, B Telephone No. +49 89 2399-7091  |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/ZA 03/00034**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-3, 5, 6, 8-18 as originally filed
4, 7 received on 23.01.2004 with letter of 15.01.2004

Claims, Numbers

1-16 received on 23.01.2004 with letter of 15.01.2004

Drawings, Sheets

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☒ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☒ the claims, Nos.: 17-19
☐ the drawings, sheets:

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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/ZA 03/00034**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | 1-16 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-16 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-16 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ZA03/00034

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Independent claim 1:

The document US-A-3 645 196 as D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document) a cooker apparatus including a drum (13); one or more food receiving pockets (34) associated with the drum (13), said pockets (34) being configured for cooking food product in a heating liquid, which pockets (34) have at least one open end (figure 3); cover means (19) for covering at least one open end of said pockets (34); and rotation means (28) for rotatably mounting said drum (13) and pockets (34) to a housing (10) such that said drum (13) is rotatable with respect to said housing (10) about a horizontal axis (figure 1, 2); from which the subject-matter of claim 1 differs in that there is provided at least one lever to partially rotate the said drum and pockets about the axis to displace the pockets between an upwardly directed inclined position and a downwardly directed inclined position.

Therefore the subject-matter of claim 1 is novel over the prior art (Article 33(2) PCT).

Document US-A-1 733 766 as D2 discloses (figure 1) a cooker apparatus with a lever for (continuously) rotating a drum with pockets about an axis, but it does not disclose to dispose the pockets between an upwardly directed inclined position and a downwardly directed inclined position as stated in claim 1.

Furthermore, in none of the documents cited in the International Search Report, if taken alone or in combination, is an indication to partially rotate a drum with a lever in a cooker apparatus as described e.g. in document D1.

Therefore the subject-matter of claim 1 is not obvious for a skilled man, however it is considered to involve an inventive step (Article 33(3) PCT).

Dependent claims 2-16:

As dependent claims 2-16 are referring to new and inventive claim 1, therefore also the subject-matter of claims 2-16 is new and inventive (Article 33 PCT) over the prior art.

The perforations may be at an end zone of the pockets.

5 The drum and pockets may be rotationally displaceable between an upwardly directed inclined position and a downwardly directed inclined position by partial rotation of said drum and pockets.

The pockets may also rotate in a plane perpendicular to the rotational displacement of the drum.

10 Thus, a food product may be placed in one or more of the pockets which do not include elements which move relative to one another during rotation. Thus, during a rotational movement, the entire drum including all of the pockets rotate as a unit.

15 Accordingly, as can be appreciated, this means that the food product is not susceptible to being pinched between moving elements and therefore the creation of mashed food products can be avoided.

20 In this specification, the words "integral", "integral unit" or the like, unless indicated to the contrary, shall thus be understood as characterizing the expression "receiving pockets", or any similar or analogous expression as being a body which does not include elements which move relative to one another during rotation.

According to a further aspect of the invention, there is provided a cooker apparatus including:

- 25 - a drum;
- one or more food receiving pockets associated with the drum, said pockets being configured for cooking food product in a heating liquid, which pockets have an open end;
- 30 - cover means for covering at least one open end of said pockets; and
- rotation means for rotatably mounting said drum and pockets to a housing such that said drum is rotatable with respect to said housing about a horizontal axis; and
- at least one lever to partially rotate the said drum and pockets about the axis to displace the pockets between an upwardly directed inclined position and a downwardly directed inclined position.

generated by burning the gas to the heat transfer medium.

The apparatus may include a housing in which the heat transfer fluid receptacle is housed.

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The housing may also house the drum.

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The heat transfer fluid receptacle may be positioned at such a location in the housing that the lower portion of the pockets i.e. the perforated portion of the pockets, is immersed in the heat transfer fluid when the drum is partially rotationally displaced by a predetermined extent.

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The heat transfer receptacle may include a sludge outlet in order to facilitate the removal of the food debris thereby prolonging the useful life of the heat transfer fluid.

The heat transfer receptacle may include the life extension means described above, including but not limited to oil filters, screens, separators, and the like.

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It should be appreciated that the heating means may also be positioned in close proximity to the receptacle containing the heat transfer fluid.

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The apparatus may include means for automatically coordinating the activity(ies) of each of the parts thereof by means of an automatic control means provided with the necessary rules and instructions.

The automatic control means may comprise suitable mechanisms for activating and controlling the various parts of the apparatus. Such control means are known in the art and will thus not be particularly described herein.

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The control means may, for example, comprise any suitable timer control mechanisms for controlling, in a timed, cooking cycle sequence, the amount of food product to be inserted in a pocket, the cooking time (i.e. the time food product is immersed in cooking liquid), the start and duration of food product discharge, the start and duration of immersion time, the activation/deactivation of the rotation of the drum.

Claims

1. A cooker apparatus including:
 - a drum;
 - 5 - one or more food receiving pockets associated with the drum, said pockets being configured for cooking food product in a heating liquid, which pockets have at least one open end;
 - cover means for covering at least one open end of said pockets; and
 - rotation means for rotatably mounting said drum and pockets to a housing such
 - 10 that said drum is rotatable with respect to said housing about a horizontal axis; and
 - at least one lever to partially rotate the said drum and pockets about the axis to displace the pockets between an upwardly directed inclined position and a downwardly directed inclined position.
- 15 2. A cooker apparatus as claimed in claim 1, wherein the pockets include a tube with a cylindrical body with walls including a plurality of perforations at a lower portion thereof, which lower portion defines an integral food pocket for releasably holding the food.
- 20 3. A cooker apparatus as claimed in claim 1 or claim 2, wherein the dimensions of the pocket at its open end corresponds with the dimensions of a cooked food container so that when the container is releasably positioned and snugly fitted over the open end of the said pocket, cooked food products are discharged from the food pocket into the container for serving purposes.
- 25 4. A cooker apparatus as claimed in any one of the preceding claims, wherein the drums include locking means to prevent unauthorized use thereof and a counter device for measuring the amount of portions fried or cooked, said counter device correlating the number of times the drum was rotationally displaced about its rotational axis through
- 30 a predetermined arc.
5. A cooker apparatus as claimed in any one of the preceding claims, the apparatus including immersing means for immersing and withdrawing at least the pockets into a

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receptacle of the heat transfer fluid.

6. A cooker apparatus as claimed in claim 5, wherein the immersing means is incorporated in the rotation means.

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7. A cooker apparatus as claimed in claim 5 or claim 6, wherein the immersion means includes a displacement mechanism for displacing the pockets, the displacement mechanism including a pivot arm fixed to the drum.

10 8. A cooker apparatus as claimed in any one of claims 5 to 7, including at least one heating means in the form of a helical coil positioned in the receptacle of the heat transfer fluid.

15 9. A cooker apparatus as claimed in any one of claims 5 to 8, including a housing in which the heat transfer fluid receptacle is housed wherein the heat transfer fluid receptacle is positioned at such a location in the housing that the perforated portion of the pockets is immersed in the heat transfer fluid when the drum is partially rotationally displaced by a predetermined extent.

20 10. A cooker apparatus as claimed in any one of claims 5 to 9, wherein the heat transfer receptacle includes a sludge outlet in order to facilitate the removal of food debris thereby prolonging the useful life of the heat transfer fluid

25 11. A cooker apparatus as claimed in any one of the preceding claims, including vibrating means provided for vibrating the pockets in order to shake off free cooking liquid from food products and/or the pockets after the frying or cooking process has been completed.

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12. A cooker apparatus as claimed in any one of claims 5 to 11, including a guide for guiding the food debris towards a cold zone of the heat transfer fluid in the receptacle.
13. A cooker apparatus as claimed in claim 12, wherein the guide includes a separation device which prevents the free movement of the food debris through the heat transfer fluid and guides the food debris away from heating elements towards a drain portion of the apparatus.
14. A cooker apparatus as claimed in claim 13, wherein the separation device is a sheet having a portion located within the heat transfer fluid and at least partially screening the heating elements from the food debris.
15. A cooker apparatus as claimed in any one of the preceding claims, including a condenser system which includes an air pump which blows air into the housing adjacent where the cooking is taking place and forces the hot air into the outlet pipes and then into a condenser tank where condensed gasses are collected and non-condensibles are directed back to the pump after passing through a filter system thereby reducing the necessity for a canopy extractor system.
16. A vending machine incorporating an apparatus as claimed in any one of the preceding claims.